Game Changing Development

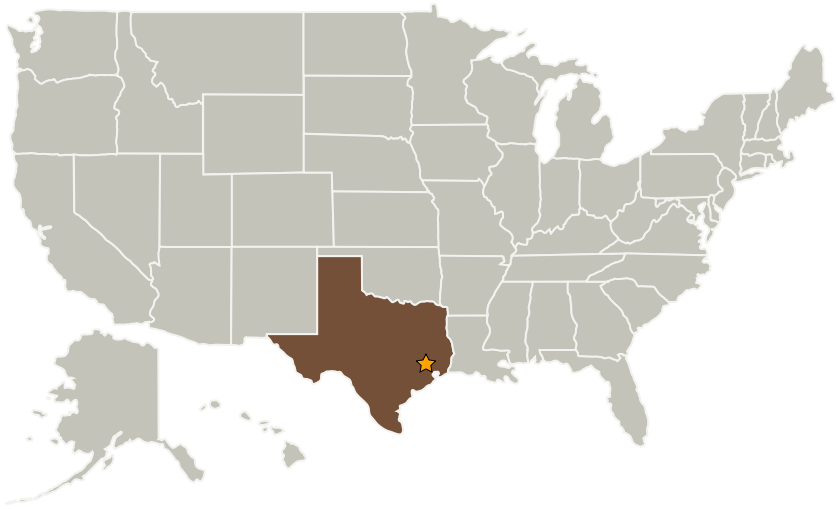
Rapid Cycle Amine (RCA) Swing Bed

Completed Technology Project (2011 - 2015)

Project Introduction

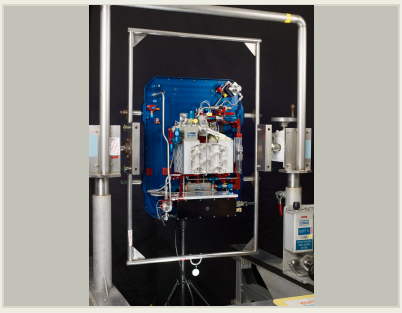
This dual function component for space suit portable life support systems (PLSS) will remove both carbon dioxide and humidity. It is under development for the next generation pressurized space suit for human exploration beyond LEO. The system is regenerative, thus there is nothing to fill or be spent that would limit the duration of extra-vehicular activity. And there is a lot of mass savings because the beds won't have to be changed out. The functions are provided by separate subsystems in the current suit on the ISS. Our hardware will reduce the mass and complexity of the suit, eliminating high maintenance hardware associated with moisture removal.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations
Texas



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Game Changing Development

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Images

RCA Swingbed
No caption.
(https://techport.nasa.gov/image/143233)

Project Website:

https://www.nasa.gov/directorates/spacetech/home/index.html

Project Management

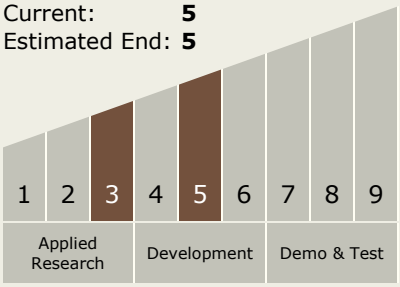
Program Director:
Mary J Werkheiser

Program Manager:
Gary F Meyering

Principal Investigator:
Daniel J Barta

Technology Maturity (TRL)

Start: **3**
Current: **5**
Estimated End: **5**



Target Destinations

The Moon, Mars